

CLAIMS

I claim:

1. A storage device having a lateral storage director, comprising:

5 at least one storage medium;

at least one recording transducer capable of recording data on said storage medium and reading data from said medium;

10 a storage device controller to control reading data from said storage medium and writing data to said storage medium;

15 wherein said lateral storage director has a capability of communicating with the storage device controller, said lateral storage director is coupled with a communication link, and said lateral storage director has a capability of communicating with a lateral storage director of another storage device via said communication link.

20 2. A storage device having a lateral storage director as in claim 1 wherein said lateral storage director includes a communications link address which may be used to accept a query by a lateral storage director of another disk drive.

3. A storage device having a lateral storage director as in  
claim 1 wherein said lateral storage director includes a  
data file table.

5 4. A storage device having a lateral storage director as in  
claim 1 wherein said lateral storage director has the  
capability of determining the available storage space of the  
storage device.

10 5. A storage device having a lateral storage director as in

claim 1 wherein said lateral storage director is capable of  
monitoring a performance parameter.

6. A storage device having a lateral storage director as in  
claim 1 wherein said storage device is a disk drive.

7. A storage device having a lateral storage director as in  
claim 1 wherein said storage device is a tape drive.

15 8. A storage device having a lateral storage director as in  
claim 1 wherein said storage device is a optical drive.

9. A method of moving data files from a first storage  
device having a lateral storage director directly to a

second storage device having a lateral storage director via a communications link comprising:

monitoring a performance parameter in said first storage device;

5 directly querying said lateral storage director of said second storage device for available storage space upon receiving an interrupt request in first said storage device;

transferring at least one data file from said first storage device to said second storage device; and,

10 updating the data file tables of the lateral storage director of said first storage device and said lateral storage director of said second storage device.

15 10. A method as in claim 9 wherein a host is coupled with said communications link and said host is notified when there is not sufficient available space to store the data file.

11. A method as in claim 9 wherein the storage space in said first storage device is released.

20 12. A method as in claim 9 wherein the performance parameter is an available space indicator of the storage device.

13. A method as in claim 9 wherein the performance parameter is a predictive failure indicator.

14. A method as in claim 9 wherein the performance parameter is the servo duty cycle.

5 15. A method as in claim 9 wherein the performance parameter is the routine actuator traffic.

16. A method as in claim 9 wherein the storage device is a disk drive.

10 17. A method as in claim 9 wherein the storage device is a tape drive.

18. A method as in claim 9 wherein the storage device is a optical drive.

15 19. A method of moving data files from a first storage device having a lateral storage director directly to a second storage device via a communications link comprising:

monitoring a performance parameter in said first storage device;

entering a host emulation mode; and,

transferring at least one data file from said first storage device to said second storage device.

20. A method of initializing a first storage device having a lateral storage director, comprising:

5 sending a query using an address resolution protocol from said first storage device connected with a communications link;

receiving a reversed address resolution protocol from at least one second storage device;

10 compiling a list of addresses in use; and,  
self-assigning an unused address.

21. A method as in claim 20 wherein the list of addresses are stored temporarily in a lateral storage director portion of read only memory.

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